

Notice of Allowability

Application No.

10/004,164

Examiner

Kristen Mullen

Applicant(s)

RUETER ET AL.

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/28/05.
2. ☒ The allowed claim(s) is/are 7-10.
3. ☒ The drawings filed on 16 April 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 4/28/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. This application is in condition for allowance except for the presence of claims 4-6 drawn to a species non-elected without traverse.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 4-6 are cancelled.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest an implantable cardiac stimulation device comprising a control circuit comprising means for determining a time interval between sensed atrial depolarizations of a first cardiac cycle; means for establishing a loss of capture window during a second cardiac cycle, the loss of capture widow including a negative sensing interval within a reference A-A time interval corresponding to the time interval determined for the first cardiac cycle, wherein the negative sensing interval ends coincident with the end of the reference A-A time interval, and a positive sensing interval of approximately the same duration as the negative sensing interval, wherein the positive sensing interval begins coincident with the end of the reference A-A time interval; means for causing the atrial pacing circuit to deliver an atrial test pulse of a predetermined energy during the second cardiac cycle, the test pulse being delivered within the reference A-A time interval and prior to the negative sensing interval;

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means for determining whether a next sensed atrial depolarization that immediately follows the atrial test pulse occurs within the loss of capture window; and means for determining whether the atrial test pulse energy is above or below a capture threshold based upon a determination as to whether the next sensed atrial depolarization occurred within the loss of capture window.

Bornzin et al. (6,389,316 and 6,480,210) and EP1116495 each show systems that monitor intrinsic atrial cycles to determine that the intrinsic atrial rate is stable. Detection windows are established that monitor for the next intrinsic atrial depolarization in each cycle. A premature atrial pace pulse is generated within a cardiac cycle but prior to the occurrence of the detection window. If an atrial depolarization is detected during the detection window, there is no capture. But if nothing is sensed during the detection window, then capture is determined because it “reset” the atrial rate. Markowitz et al. (5,601,615) shows a system that monitors intrinsic atrial cycles. A premature atrial pace pulse is generated at 50% of the average escape interval (of the intrinsic atrial cycles measured). The system monitors for an atrial depolarization following the premature atrial pace pulse during a Not Reset Window (NRW). If an atrial depolarization is sensed during the NRW, it is determined that there is not capture. If no atrial depolarization is sensed during NRW, and an atrial depolarization is sensed after NRW, then atrial capture is determined.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen Mullen whose telephone number is (571) 272-4944. The examiner can normally be reached on M-F, 10:30 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristen Mullen

kdm

Kennedy Schaeetzle
KENNEDY/SCHAETZLE
PRIMARY EXAMINER
6/22/05